

$^{11}\text{B}(\gamma,\gamma)$ 1978Ku12,1980Mo23

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	J. H. Kelley, C. G. Sheu		NP A880, 88 (2012)	1-Jan-2011

- 1958Me79: $^{11}\text{B}(\gamma,\gamma)$.
 1958Ra14: $^{11}\text{B}(\gamma,\gamma)$.
 1959Co95: $^{11}\text{B}(\gamma,\gamma)$.
 1963Va10: ^{11}B ; measured not abstracted; deduced nuclear properties.
 1964Bo22: $^{11}\text{B}(\gamma,\gamma)$ $E_\gamma=0.5$ to 3.0 MeV, measured σ . ^{11}B deduced Γ -level.
 1965Ke05: $^{11}\text{B}(\gamma,\gamma)$ $E\leq 2.7$ MeV, measured $T_{1/2}(2.13$ MeV level). ^{11}B level deduced $T_{1/2}$.
 1965Sc04: ^{11}B ; measured not abstracted; deduced nuclear properties.
 1968Cr07: $^{11}\text{B}(\gamma,\gamma)$ $E\approx 1.8$ - 3.6 MeV, measured σ . ^{11}B levels deduced Γ -level.
 1973Sa21: $^{11}\text{B}(\gamma,\gamma')$ $E=5$ MeV; measured $\sigma(E_\gamma)$. ^{11}B levels deduced level-width.
 1978Ku12: $^{11}\text{B}(\gamma,\gamma)$ $E=15$ MeV bremsstrahlung, measured transmission coefficients. ^{11}B levels deduced Γ_γ .
 1980Mo23: $^{11}\text{B}(\gamma,\gamma')$ $E=10.3$ MeV bremsstrahlung; measured E_γ , I_γ , self-absorption. ^{11}B deduced effective temperature. ^{11}B levels deduced Γ , γ -multipolarity.
 2009Ru04: 11b(polarized γ , γ'), $E=1$ - 100 MeV; measured E_γ , I_γ , azimuthal asymmetries; deduced levels, mixing ratios.

 ^{11}B Levels

E(level)	J^π	$T_{1/2}$	Comments
0 2124 3	$1/2^-$	0.117 eV 4	$\Gamma_{\gamma 0}=0.117$ eV 4 E(level): from 2124 keV 3 (1965Sc04). $\Gamma_{\gamma 0}$: from 0.140 eV 18 (1958Me79), 0.11 eV 4 (1964Bo22), 0.137 eV 20 (1965Ke05), 0.114 eV 5 (1965Sc04), 0.12 eV 2 (1968Cr07), 0.11 eV 2 (1978Ku12), 0.118 eV 13 (1980Mo23) also see 0.22 eV 6 (1963Va10) 0.23 eV 9 (1973Sa21). J^π : from (1958Me79).
4.44×10^3	$5/2^-$	0.56 eV 2	$\Gamma_{\gamma 0}=0.56$ eV 2 $\Gamma_{\gamma 0}$: from 0.56 eV 8 (1958Ra14), 0.430 eV 95 (1959Co95), 0.53 eV 21 (1973Sa21), 0.615 eV 37 (see 1975Aj02), 0.58 eV 4 (1978Ku12), 0.55 eV 2 (1980Mo23). Also see 0.615 eV 37 (In 1975Aj02). Γ : also see $\Gamma=0.55$ eV 20 from (1980Mo23).
5.02×10^3	$3/2^-$	1.97 eV 7	$\Gamma_{\gamma 0}=1.68$ eV 6 $\Gamma_{\gamma 0}$: from 1.80 eV 13 (1978Ku12), 1.64 eV 7 (1980Mo23); also see 1.1 eV 2 (1959Co95). Γ : from (1980Mo23).
6.74×10^3	$7/2^-$	0.030 eV 7	$\Gamma_{\gamma 0}=0.021$ eV 5 $\Gamma_{\gamma 0}$: from 0.021 eV 5 (1980Mo23). Γ : using $\Gamma_{\gamma 0}/\Gamma=0.70$ gives $\Gamma=0.030$ eV 7 (1980Mo23).
6.79×10^3	$1/2^+$	0.39 eV 5	$\Gamma_{\gamma 0}=0.26$ eV 3 $\Gamma_{\gamma 0}$: from 0.26 eV 3 (1980Mo23). Γ : using $\Gamma_{\gamma 0}/\Gamma=0.66$ gives $\Gamma=0.39$ eV 5 (1980Mo23).
7.29×10^3	$5/2^+$	1.14 eV 8	$\Gamma_{\gamma 0}=1.00$ eV 7 $\Gamma_{\gamma 0}$: from 1.17 eV 26 (1978Ku12), 0.99 eV 7 (1980Mo23). Γ : from (1980Mo23).
7.98×10^3	$3/2^+$	1.15 eV 15	$\Gamma_{\gamma 0}=0.53$ eV 7 $\Gamma_{\gamma 0}$: from 0.53 eV 7 (1980Mo23). Γ : from (1980Mo23).
8.56×10^3		1.00 eV 9	$\Gamma_{\gamma 0}=0.53$ eV 5 $J^\pi < 5/2^-$. $\Gamma_{\gamma 0}$: from 0.53 eV 5 (1980Mo23). Γ : using $\Gamma_{\gamma 0}/\Gamma=0.53$ gives $\Gamma=1.00$ eV 9 (1980Mo23); from erratum.
8.92×10^3	$5/2^-$	4.31 eV 24	$\Gamma_{\gamma 0}=4.17$ eV 21 $\Gamma_{\gamma 0}$: from 4.20 eV 52 (1978Ku12), 4.16 eV 23 (1980Mo23). Γ : from (1980Mo23).

$^{11}\text{B}(\gamma,\gamma)$ 1978Ku12,1980Mo23 (continued)

$\gamma(^{11}\text{B})$

E_γ	I_γ^{\ddagger}	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. [†]	δ	Comments
2.12×10^3	100	2124	$1/2^-$	0		M1		
2264.9	6.3 4	7.29×10^3	$5/2^+$	5.02×10^3	$3/2^-$	M1+E2	+0.028 +78-75	
2840.2	5.3 4	7.29×10^3	$5/2^+$	4.44×10^3	$5/2^-$	M1+E2	-0.08 +16-12	
2895	14.2 6	5.02×10^3	$3/2^-$	2124	$1/2^-$	M1+E2	-0.19 +10-17	
4.44×10^3	100	4.44×10^3	$5/2^-$	0		M1+E2	+0.158 +25-21	mixing ratio from (2009Ru04).
4474.3	2.7 1	8.92×10^3	$5/2^-$	4.44×10^3	$5/2^-$	M1+E2	-0.061 +25-21	
5.02×10^3	85.8 26	5.02×10^3	$3/2^-$	0		M1+E2	-0.036 13	mixing ratio from (2009Ru04).
6.74×10^3		6.74×10^3	$7/2^-$	0				
6.79×10^3		6.79×10^3	$1/2^+$	0				
7282.9	88.4 27	7.29×10^3	$5/2^+$	0		M1+E2	+0.001 +22-21	mixing ratio from (2009Ru04).
7.98×10^3		7.98×10^3	$3/2^+$	0				
8.56×10^3		8.56×10^3		0				
8916.3	97.3 29	8.92×10^3	$5/2^-$	0		M1+E2	0.000 14	mixing ratio from (2009Ru04).

[†] From (2009Ru04).

[‡] From (2009Ru04).

